

Title (en)
ELECTROCHEMICAL CELL HAVING A FRAME SEAL FOR ALTERNATIVE SEALING AGAINST MARGINAL LEAKAGES OF THE ELECTROLYTE

Title (de)
ELEKTROCHEMISCHE ZELLE MIT RAHMENDICHTUNG ZUR ALTERNATIVEN ABDICHTUNG GEGEN RANDLÄUFIGKEITEN DES ELEKTROLYTEN

Title (fr)
CELLE ÉLECTROCHIMIQUE DOTÉE D'UN JOINT DE CADRE POUR L'ÉTANCHÉITÉ CONTRE DES FUITES DE BORD DE L'ÉLECTROLYTE

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Application
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Abstract (en)
[origin: WO2012152367A2] The invention relates to an electrochemical cell, comprising an anode half-shell (14) and a cathode half-shell (15) which are separated from one another by a membrane (8), having the corresponding electrodes, and the anode half-shell (14) and the cathode half-shell (15) each have an outer wall (12, 13), each outer wall having in the contact region of both half-shells flange regions (16, 17) which are designed as a frame, and the flange regions (16 and 17) have assembly holes (4) which mark an inner region (23) and an outer region (24) of the electrochemical cell and a gas diffusion electrode (6) which rests on a support system (7), and a porous medium (9) which is located above the gas diffusion electrode (6), and devices for delivering and removing gas (18, 19) and electrolyte. The invention is in particular characterised in that at least one peripheral frame seal (3) is provided in the contact region of both half-shells between the frame-like flange regions (16 and 17) of the outer walls (12 and 13) of both half-shells, and said seal rests on the membrane (8), wherein the porous medium (9) and the gas diffusion electrode (6) are located on the frame-like cathodic flange region (17) and in said region the peripheral frame seal (3) overlaps the porous medium (9) and the gas diffusion electrode (5), wherein said overlap region (2) has at least two profiled areas (1), wherein the peripheral frame seal has at least one further profiled area (22) in the contact region of both half-shells between the frame-like flange regions (16 and 17) outside the overlap region of the porous medium (9) and the gas diffusion electrode (6) and/or at least one deformable sealing cord is arranged, wherein the further profiled area (22) and/or the deformable sealing cord (5) is disposed in the inner region (23) of the electrochemical cell.

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See references of WO 2012152367A2

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